

REMARKS

With the entry of the present amendments, claims 1, 6-15 and 46-75 are pending in the application. Claims 2-5 and 16-45 were previously cancelled. Claim 1 has been amended. New claims 46-75 have been added. Support for the amendments to claim 1 can be found in the specification, or originally filed, on page 4, lines 19 and 20 which references polymerizable vinyl ester compounds (plural) and, thereby, indicates that more than one type of polymerizable vinyl ester compound is present in the adhesive compositions. Additional support for the amendments to claim 1 can be found in claim 1 as originally filed, which specified that the terminal R groups on the vinyl esters can be both vinyl carboxylate radicals and epoxide ester radicals. Support for new claims 46-75 can be found in claims 16-45, as originally filed.

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

I. Rejection of Claims Under 35 U.S.C. § 103(a)

Claims 1 and 6-15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Australian patent no. 56401-86 and Japanese patent no. 89716 in view of U.S. patent no. 4,729,696 (“Goto”) and U.S. patent no. 5,891,942 (“Parish”). Applicants respectfully traverse.

As amended, independent claim 1 recites, in relevant part, a curable adhesive composition comprising a mixture of polymerizable vinyl esters wherein the mixture of polymerizable vinyl esters comprise both terminal vinyl carboxylate radicals and terminal epoxide ester radicals and further wherein the average ratio of “n” repeat units to terminal vinyl carboxylate radicals for the polymerizable vinyl esters in the composition is in the range from 0.4:1 to 2:1.

As noted by the Examiner, Australian patent no. 56401-86 teaches compositions comprising the reaction product formed by the reaction of acrylic acids and their derivatives with bisphenols containing two epoxy groups. (Page 4, lines 23-25.) However, Australian patent no. 56401-86 does not specifically teach a mixture of vinyl esters that includes those having both vinyl carboxylate and unreacted epoxide ester groups, wherein the average of the

ratio of the number of repeat units in the vinyl esters to the number of vinyl carboxylate groups is in the range from 0.4:1 to 2:1.

Japanese patent no. 89716 also teaches compositions comprising a vinyl ester that is the reaction product of methacrylic acid and a bisphenol comprising two epoxy groups. (Page 4 of translation, formula 1.) However, like the Australian patent, Japanese patent no. 89716 fails to specifically teach a mixture of vinyl esters having both vinyl carboxylate and unreacted epoxide ester groups, wherein the average of the ratio of the number of repeat units in the vinyl esters to the number of vinyl carboxylate groups is in the range from 0.4:1 to 2:1.

As in the case of the two primary references cited by the Examiner, the two secondary references, Goto and Parish, also fail to teach a mixture of vinyl esters having both vinyl carboxylate and unreacted epoxide ester groups, wherein the average of the ratio of the number of repeat units in the vinyl esters to the number of vinyl carboxylate groups is in the range from 0.4:1 to 2:1.

Thus, none of the references cited by the Examiner teach or suggest each and every limitation of claim 1, as amended. Moreover, even if the references cited by the Examiner explicitly or inherently taught a mixture of vinyl esters having both vinyl carboxylate and unreacted epoxide ester groups (and Applicants maintain that they do not), it would not be obvious to modify the compositions of Australian patent no. 56401-86 or Japanese patent no. 89716 to arrive at a mixture wherein the average of the ratio of the number of repeat units in the vinyl esters to the number of vinyl carboxylate groups is in the range from 0.4:1 to 2:1, as recited in amended claim 1, because none of the cited prior art references recognize this ratio as a result-effective variable.

“A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).” (See M.P.E.P. § 2144.05.) There is no evidence that the authors of any of the references cited by the Examiner recognized that the average ratio of the number of repeat units to the number of vinyl carboxylate groups in a mixture of vinyl esters comprising both vinyl carboxylate and epoxide ester groups was significant in achieving any particular result. Therefore, the ratio cited in amended claim 1 is not obvious over the teaching of the references cited by the Examiner. For at least this

reason, Applicants request that the rejection of claim 1 and all claims depending therefrom be withdrawn.

II. New Claims

Like claim 1, new claims 46-75 each recite a composition comprising a polymerizable vinyl ester having both vinyl carboxylate and epoxide ester groups, wherein the average of the ratio of the number of repeat units in the vinyl esters to the number of vinyl carboxylate groups is in the range from 0.4:1 to 2:1. Therefore, these claims are patentable over the cited prior art references for at least the same reasons claim 1 is patentable over these references.

Applicants believe that the present application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

A fee for a three month extension of time accompanies this filing. The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-5254. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-5254.

Respectfully submitted,

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